

IN THE CLAIMS

Please **cancel** claims 1-3 without prejudice.

Please **add** claims 4-13 as shown in the Status of the Claims, *infra*. No new matter has been added.

STATUS OF THE CLAIMS

Claims 1-3 (canceled)

Claims 4-13 (newly added)

4. (New) An omnidirectional vision sensor comprising:

an optical system including a body-of-revolution mirror having a convex portion so as to be able to obtain an image in a field of viewing range 360 degrees around the vision sensor,

a light-receiving element whose optical axis is positioned in coincidence with a revolution axis of the body-of-revolution mirror, and

imaging means for converting an optical image obtained by the light-receiving element through the optical system to an image data;

wherein the body-of-revolution mirror is positioned so as to place the convex portion side of the body-of-revolution mirror facing to the imaging means side; the body-of-revolution mirror includes a cutaway section at the center of the convex portion of the body-of-revolution mirror; and a wide-angle lens having a convex portion at its one side is provided within the cutaway section of the body-of-revolution mirror to place the convex portion of the wide-angle lens facing to the opposite side of the imaging means so that the imaging means is able to make an image process for an image at front side through the wide-angle lens provided within the cutaway-section of the body-of-revolution mirror.

5. (New) An omnidirectional vision sensor according to claim 4, wherein a field of view of the wide-angle lens coincides with a blind spot of the body-of-revolution mirror.

6. (New) An omnidirectional vision sensor according to claim 4, wherein the body-of-revolution mirror is an hyperbolic mirror.
7. (New) An omnidirectional vision sensor according to claim 4, wherein the body-of-revolution mirror is a spherical mirror.
8. (New) An omnidirectional vision sensor according to claim 4, wherein the body-of-revolution mirror is a conical mirror.
9. (New) An omnidirectional vision sensor according to claim 4, wherein the body-of-revolution mirror is a parabolic mirror.
10. (New) An omnidirectional vision sensor according to claim 5, wherein the body-of-revolution mirror is an hyperbolic mirror.
11. (New) An omnidirectional vision sensor according to claim 5, wherein the body-of-revolution mirror is a spherical mirror.
12. (New) An omnidirectional vision sensor according to claim 5, wherein the body-of-revolution mirror is a conical mirror.
13. (New) An omnidirectional vision sensor according to claim 5, wherein the body-of-revolution mirror is a parabolic mirror.